REMARKS

Reconsideration of the rejection set forth in the Office Action is respectfully requested. By this Amendment claims 6 and 8-13 have been canceled without prejudice or disclaimer and claims 1, 3-5, 7, and 14-15 have been amended. Currently, claims 1-5, 7, and 14-15 are pending in this application.

Election/Restriction Requirement

Applicants confirm election of Group I, claims 1-7 and 14-15, without prejudice. Claims 8-13 have been canceled.

Rejection under 35 USC 101

Applicants have amended the claims to overcome this rejection and respectfully request that it be withdrawn.

Rejection of claims under 35 USC 102

Claims 1-7 and 14-15 were rejected under 35 USC 102 as anticipated by Minhazuddin (U.S. Patent Application Publication No. 2004/0073641). This rejection is respectfully traversed in view of the amendments to the claims and the following arguments.

This application relates to a way to collect management information on a communication network. Conventionally, a network element operating on a network would monitor numerous aspects of its status, such as the flows of data passing through the network element and operation of the network itself. The network element may be configured to monitor thousands of different parameters. (Specification at paragraph 3). This information is stored in a Management Information Base (MIB) Id. and may be retrieved using a management protocol such as Simple Network Management Protocol (SNMP). (Specification at paragraph 21).

Unfortunately, transmission of thousands of pieces of information from a network element to a management station increases the overhead associated with managing the network element. (Specification at paragraph 4). The large amount of data may impact the scalability of the network. Additionally, where the data is specific to the underlying technology, the management system will need to have detailed information about the underlying technology to interpret the data. Id.

Applicants sought to change this paradigm by providing a way for the health of the network elements to be monitored rather than having the individual pieces of data monitored. Specifically, applicants sought to provide universal health indicators of the network elements. The raw data supporting the health indicators is obtained by the network elements and maintained by the network elements in a MIB in a normal manner. However, rather than transmit the raw data to the management station, as was normally performed, the raw data is maintained on the network elements and used by the network elements to compute the health indicators associated with the network element. The network element then reports the health indicators to the management system rather than reporting the raw data. (Specification at paragraph 7, paragraphs 16-17). This enables less data to be transmitted from the network element to the management system and allows the management system to review status (health) information from multiple types of network elements without requiring the management system to be configured to interpret raw data of each of the types of network elements being monitored on the communication network.

Minhazuddin teaches a system in which a performance monitoring agent 240 on a client end system, such as a personal computer or IP phone, can cause a monitoring system 224 to monitor the network when the quality of service (QoS) being provided for a Voice over IP (VoIP) call falls below a particular level. The monitoring agent can cause the monitoring system 224 to enter into a detailed monitoring state (1) automatically if the monitoring agent 240 detects that the session quality falls below a particular level; or (2) in response to a request from a VoIP end user (i.e. if a user pushes a particular button). (Minhazuddin at paragraph 30). In either instance, the monitoring system 224 will enter into a detailed monitoring state, in which the system monitor is able to collect detailed information about the state of the network during the VoIP call (Minhazuddin at paragraph 32). This allows the monitoring system to either reconfigure the network to fix the problem, or enables the operating state of the network to be recorded so that the particulars of the VoIP call and network state can later be reviewed by a network administrator.

In Minhazuddin, when the agent or the user causes the monitoring system to enter the detailed monitoring state, a statistics collection agent 248 requests and obtains statistics from the endpoints (Minhazuddin at paragraphs 42-43). Minhazuddin describes several statistics in paragraph 43 that may be collected. Basically, once monitoring has started, a session monitor

224 is added to the call (either via multicast or multiple unicast) to enable the session monitor to listen for Real Time Control Protocol (RTCP) packets from the end points and stores them in a database. (Minhazuddin at paragraph 32).

Thus, Minhazuddin teaches a system in which a deterioration in quality of service may cause monitoring of the network state to begin. The triggering event may be either a user-perceived deterioration in QoS or a user-agent monitored detection in deterioration of QoS. Neither of these instances involves a computed technology independent high level health indicator. When the detailed monitoring state is entered, the RTCP packets on the system will be monitored and the end systems on the VoIP call may be polled to collect additional statistic information.

All of the statistics, etc., involved in the monitoring system of Minhazuddin appear to be technology specific. As discussed above, applicants were instead focused on providing a system that would be technology independent to enable health indicators to be created from the technology specific raw and computed information.

Applicants have amended the claims to focus the claims on an area not taught by Minhazuddin. Specifically, applicants have amended independent claim 1 to recite that the method includes the step of obtaining a network technology independent high-level health indicator from a managed network element, and that the network technology independent high-level health indicator is computed from at least one of a technology independent intermediate-level heath indicator and a technology independent raw heath indicator. Likewise, independent claim 1 has been amended to recite that the technology independent intermediate-level health indicator and technology independent raw health indicator are computed values derived from (1) technology dependent raw measurements associated with performance of the network taken by the managed network element, and (2) technology dependent computed measurements computed from the technology dependent raw measurements taken by the managed network element.

Thus, claim 1 recites a hierarchy similar to that shown in Fig. 2 of the instant application, in which a technology independent high-level health indicator is computed from raw or intermediate computed technology independent health indicators, and the technology independent lower level health indicators are computed from network technology specific raw measurements or network technology specific computed measurements. Support for the claim amendments is contained, for example, in the specification as originally filed at paragraphs 22-

26. Minhazuddin does not teach or suggest a hierarchical system of this nature. Accordingly, applicants respectfully request that the rejection of claim 1 and those claims dependent thereon be withdrawn. Independent claim 14 has been amended in a somewhat different manner to also recite the hierarchical nature of the technology dependent raw and computed measurements, and the technology dependent raw and higher level health indicators. Since this concept is not shown in Minhazuddin, applicants respectfully request that the rejection of this claim be withdrawn.

Conclusion

In view of these amendments and remarks, applicants respectfully submit that the claims pending in this application are in condition for allowance and respectfully request an action to that effect. If the Examiner believes a telephone interview would further prosecution of this application, the Examiner is respectfully requested to contact the undersigned at the number indicated below.

Extension of Time

Applicants request a one month extension of time to respond to the Office Action. Payment of the fee for the one month extension of time is being submitted herewith. If any additional fees are due in connection with this filing, the Commissioner is hereby authorized to charge payment of the fees associated with this communication or credit any overpayment to Deposit Account No. 141315 (Ref. 16665ROUS01U).

Respectfully Submitted

Dated: August 31, 2009

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